

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for assessing irradiation intensity of a laser beam including steps of:

forming an irradiation region on a reference object on which photo-ablation is caused by irradiating aan ultraviolet laser beam for ablation, the reference object having a layer in which a transmitting quantity of illumination light changes in accordance with a thickness, by processing the reference object in a condition of ablating a predetermined irradiation region to a uniform depth with an ultraviolet laser processing device;

obtaining an image having information on a gradation contrast change based on the transmitting quantity of the illumination light transmitted through respective positions in the irradiation region of the reference object by projecting the illumination light onto the reference object on which the irradiation region has been formed; and

assessing appropriateness of irradiation intensity distribution of the ultraviolet laser processing device based on whether the gradation contrast change is in a permissible range by analyzing information on a luminance change in the irradiation region of the image.

2. (Previously Presented) The method for assessing irradiation intensity of the laser beam according to claim 1, wherein the reference object includes a commercially available film for photographing.

3. (Currently Amended) The method for assessing irradiation intensity of the laser beam according to claim 1, wherein

forming the irradiation region includes repeatedly providing a plurality of uniform irradiation to the reference object taking a minimum ablation depth as a unit,

obtaining the image having the information on the gradation contrast change

includes obtaining a plurality of the images having the information on the gradation contrast change which are different in the number of irradiation, and

assessing appropriateness of the irradiation intensity distribution includes combining the information on the luminance change in the irradiation region of each of the images to obtain information on the irradiation intensity distribution for a whole region to be analyzed.

4. (Currently Amended) An apparatus for assessing irradiation intensity of a laser beam comprising:

a reference object on which photo-ablation is caused by irradiating an ultraviolet laser beam for ablation and on which an irradiation region is formed by an ultraviolet laser processing device which processes the reference object in a condition of ablating a predetermined irradiation region to a uniform depth and on which photo-ablation is caused by irradiating a laser beam for ablation, the reference object having a layer in which a transmitting quantity of illumination light changes in accordance with a thickness;

~~an ultraviolet laser processing device which processes the reference object in a condition of ablating a predetermined irradiation region to a uniform depth;~~

an image obtaining device which obtains an image having information on a gradation contrast change based on the transmitting quantity of the illumination light transmitted through respective positions in the irradiation region of the reference object by projecting the illumination light onto the reference object on which the irradiation region has been formed; and

an assessing device which assesses appropriateness of irradiation intensity distribution of the ultraviolet laser processing device based on whether the gradation contrast change is in a permissible range by analyzing information on a luminance change in the irradiation region of the image.

5. (Canceled).
6. (Previously Presented) The apparatus for assessing irradiation intensity of a laser beam according to claim 4, wherein

the irradiation region is formed by repeatedly providing a plurality of uniform irradiation to the reference object taking a minimum ablation depth as a unit,
the image obtaining device obtains a plurality of the images having information on the gradation contrast change which are different in the number of irradiation, and
the assessing device combines the information on the luminance change in the irradiation region of each of the images to obtain information on the irradiation intensity distribution for a whole region to be analyzed.
7. (Previously Presented) The apparatus for assessing irradiation intensity of a laser beam according to claim 4, wherein the reference object includes a commercially available film for photographing.
8. (Currently Amended) A laser beam irradiation system comprising:

an irradiation optical system for irradiating aan ultraviolet laser beam for ablation onto an object to be irradiated;
a reference object on which photo-ablation is caused by irradiating the laser beam and on which an irradiation region is formed by the irradiation optical system which irradiates the laser beam onto the reference object in a condition of ablating a predetermined irradiation region to a uniform depth and on which photo-ablation is caused by irradiating a laser beam for ablation, the reference object having a layer in which a transmitting quantity of illumination light changes in accordance with a thickness;
an ultraviolet laser processing device which processes the reference object in a condition of ablating a predetermined irradiation region to a uniform depth;
an image obtaining device which obtains an image having information on a

gradation contrast change based on the transmitting quantity of the illumination light transmitted through respective positions in the irradiation region of the reference object by projecting the illumination light onto the reference object on which the irradiation region has been formed;

an assessing device which assesses appropriateness of irradiation intensity distribution of the ~~ultraviolet laser processing device~~irradiation optical system based on whether the gradation contrast change is in a permissible range by analyzing information on a luminance change in the irradiation region of the image; and

a control device which obtains control data for the system so that the object to be irradiated achieves a condition of a desired change based on an analytical result from the assessing device.

9. (Original) The laser beam irradiation system according to claim 8, further comprising a laser scanning unit which is arranged in the irradiation optical system and scans the object to be irradiated by the laser beam, and

wherein the control device obtains the control data for the laser scanning unit.

10. (Canceled).

11. (Previously Presented) The laser beam irradiation system according to claim 8, wherein

the irradiation region is formed by repeatedly providing a plurality of uniform irradiation to the reference object taking a minimum ablation depth as a unit,

the image obtaining device obtains a plurality of the images having information on the gradation contrast change which are different in the number of irradiation, and

the assessing device combines the information on the luminance change in the irradiation region of each of the images to obtain information on the irradiation intensity distribution for a whole region to be analyzed.

12. (Previously Presented) The laser beam irradiation system according to claim 8,
wherein the reference object includes a commercially available film for photographing.